



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/805,016

03/19/2004

King Chung

15353US02

7796

23446 7590 05/12/2009  
MCANDREWS HELD & MALLOY, LTD  
500 WEST MADISON STREET  
SUITE 3400  
CHICAGO, IL 60661

EXAMINER

BOCKELMAN, MARK

ART UNIT

PAPER NUMBER

3766

MAIL DATE

DELIVERY MODE

05/12/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/805,016 | <b>Applicant(s)</b><br>CHUNG ET AL. |  |
|                              | <b>Examiner</b><br>Mark W. Bockelman | <b>Art Unit</b><br>3766             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 25-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2-17-2009 has been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 states that the plurality of signal input devices are in the first case, claim 6 states they are in the second case. The statements contradict each other rendering them confusing. Did applicant mean to state a second set input devices is in the second case.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3766

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 9-11, 13-14, 17-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Miller 6,620,094 in view of any one of Nielsen et al USPN, 6839,447, Killion et al. USPN 5,524,056, Borstel USPN 4,467,145, Nordqvist et al USPN 6,862,359 or applicant's admitted prior art in paragraph [0011] of applicant's specification.

Miller considers "hearing aids" to include cochlear implants. This is clear from the background of the invention at column 1, lines 35-40) since electrical stimulators are only used in cochlear implants because that is the only place that electrical stimulation is performed to enhance hearing. Furthermore, in figures 1 and 2 Miller demonstrates the basic components of semi-implantable and fully implantable hearing aid systems, the types of systems used by applicant. In figure 1 Miller again teaches the transducer to be mechanical, electrical or acoustical (column 2 lines 60-64). Furthermore, with respect to the transducer 203, "The transducer 203 is implanted within the middle ear cavity or cochlea as a function of the implant type." The examiner considers it inherent or otherwise obvious that the use of the word "transducer" as used in Miller's various embodiments, is intended to cover mechanical, acoustic as well as implanted cochlear electrical stimulators and thus cochlear implants as described.

With respect to figure 3, the examiner considers the input devices to comprise omnidirectional microphone 312, acoustic source 107, wireless (directional microphone 304) and wireless source 305 (telecoil). A second processor in the form of a speech processor is shown at 311. Interface system 301 may contain its own circuitry and

Art Unit: 3766

software to provide input source selection by masking out various sources and thus selecting the strongest input mode and extracting out the best signal fed into the processor. See column 6 line 50 to column 7 line 24. The examiner considers this embodiment to constitute an automatic switching of sources or modes of operation. In addition, user selected switching may be used. Applicant provides no details as to their means for switching and thus the examiner considers such to be inherent to Miller or at least obvious. Both processors are depicted as housed in the same case 306 as well as omnidirection microphone with input devices 108, 313 and 305 in another case.

Regarding claims 21 and 23, one can pick and select components within the first processor unit such as the input lines and consider them part of the second processor with the remaining circuitry as part of the second processor. The limitation merely provides for labeling components any way you wish. For claim 24, embodiment 5 shows a volume control (eg. amplification device positioned after the mode selection circuit. To have included amplification as part of the second processor is inherent or otherwise obvious. To have placed the signal processors on the same chip would have been obvious. The examiner considers all of the input devices to be direct audio input devices.

Applicant differs in reciting that a switch selects at least one of: microphone modes, a telecoil or microphone connection based upon the detection of a magnetic field, a plurality of listening programs. Applicant's paragraph [0011] admit that each of these types of switches were known to be used in hearing aids. In addition, Borstel is cited as showing a magnetic field sensitive switch for automatic switching between a

Art Unit: 3766

microphone and telecoil, Killion et al. USPN 5,524,056 teaches automatic switching between directional and omnidirectional modes of microphones and Nielsen et al. USPN 6,839,447 and Nordqvist et al. USPN 6,862,359 teach automatic switching between listening programs. These are standard operation systems for hearing aid type devices including cochlear implants and the inclusion of such into the Miller device would have been an obvious modification.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 6-8, 12, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller 6,620,094 alone or in view of Griffith et al. USPN 6,842,647.

To have placed the signal processors on the same chip would have been obvious to ease manufacturing. Providing impedance matching between interface system 301 of Miller and the speech processor would be a notoriously old and well know to prevent unwanted reflections. Alternatively, to have modified Miller so as to provide an implanted speech processor within implantable portion 306 of Miller and provided an impedance matching circuit between the interface unit and the implant device would have been an obvious improvement as a well known alternative demonstrated by Griffith et al USPN 6,842,647. Such would entail at least one of the plurality of input devices to be placed in the second case.

***Response to Arguments***

Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark W. Bockelman whose telephone number is (571) 272-4941. The examiner can normally be reached on Monday - Friday 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Layno can be reached on (571) 272 -4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark W Bockelman/  
Primary Examiner, Art Unit 3766  
May 11, 2009